



Introduction

- ❑ Plant Disease Prediction is an application which will detect and provide some remedial measures for diseases in the crop to the users.
- ❑ Initially the client can either click or upload the image of the diseased crop in the application.
- ❑ Once the plant disease is matched with the existing data, then the effective remedial measures such as what action should they take about the disease is provided.
- ❑ The image is processed for the effective remedial measures using the machine learning InceptionV3 Algorithm.
- ❑ In its current form, our application would be as a preliminary tool that could assess the users by providing some remedial measures like what type of fertilizers to use and the measures to be taken by comparing it with the datasets provided in the database.

List of Components

Hardware

- Computer system Processor:
- Pentium3 and above.
- Ram: 1GB or higher.
- Hard Disk: 20GB

Software

- Google Chrome [for reference]
- Microsoft word 2010[for making report]
- PowerPoint [for making presentation]
- Visual studio [for implementation]
- Front end [user interface]

Applications of project

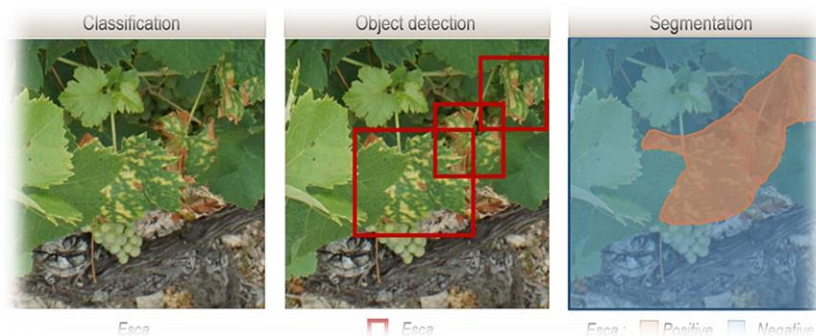
Precision Agriculture: Early disease detection and targeted treatment minimize crop loss and reduce chemical usage.

Automated Monitoring Systems: Drones, satellites, and IoT devices provide real-time crop health monitoring and disease alerts.

AI-Powered Mobile Apps: AI-driven apps offer instant leaf disease diagnosis, treatment suggestions, and data analysis for farmers.

Future scope of project

- ✓ Our project has shown pretty good accuracy, it can be implemented in real time mobile applications and web services, so that farmers can identify diseases simply by taking photo of suspected leaves of plants.
- ✓ Other than plant leaf disease identification, it can also be used for identification and classification of nutrients deficiency of plant leaves.
- ✓ Our project has shown pretty good accuracy, it can be implemented in real time mobile applications and web services, so that farmers can identify diseases simply by taking photo of suspected leaves of plants.
- ✓ Other than plant leaf disease identification, it can also be used for identification and classification of nutrients deficiency of plant leaves.



References

◆ Book:

Learn AI with python

AI & Machine learning for

coders

◆ Websites:

<https://www.elsevier.com>

<https://www.scholar.google.com>

<https://www.sciencedirect.com>

<https://www.sciencedirect.com>

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CONCLUSION / RESULT

We have successfully developed a computer vision-based system for plant disease detection. Also, the proposed system is computationally efficient because of the use of statistical image processing and machine learning model. Table 3 illustrates the overall benefits of our system over the other approaches.

Our project is deployed into the web application. It can be extended to use as an embedded application.

More number of the images can be added to improve accuracy along with the testing of transfer learning. For the large-scale open field cultivation, we can use real time monitoring using drones and other autonomous agriculture vehicles